

Management Information System (MIS) and Institutional Effectiveness of Universities in South-South Geo-Political Zone of Nigeria

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Abstract

The rapid development and usage of management information system during the past three decades has had many points of contact with effective performance of universities. To achieve the purpose of the study, three (3) research hypotheses were formulated to guide the study. Ex-post-facto design was adopted for the study. The population consisted of six thousand from four (4) universities in the zone. The study adopted the purposive sampling technique, to draw a sample of 414 staff of the universities used for the study, management information system usage and universities effectiveness questionnaire (MISUEQ) was used to elicit information for the study. The data obtained was analyzed using the Pearson's product moment correlation coefficient. The findings of the study revealed that there is a relationship between management information system usage and institutional effectiveness in terms of examination conduct, students records keeping, staff appraisal, library services. Based on the findings the study concludes that the usage of management information system influences institutional effectiveness of universities. It was therefore recommended among others that more MIS infrastructures should be adequately provided in our universities since the task before them is enormous and more awareness and training should be organized regularly for staff heading faculties, department and units in the system.

Keyword: Management, Information System, and Institutional Effectiveness.

1. Introduction

Information is undoubtedly a veritable tool for the sustenance of any organization and hence, its proper management is a panacea for organizational success. The major challenge for the millennium is to exploit the potential of computer technology to help managers of organizations and decision-makers to achieve their organizational objectives. The university system as a centre of excellence for teaching, research, community service and development is often faced with the problem of how to effectively process relevant information to achieve the predetermined goals and objectives. The role of information in decision-making in the educational system is very significant for decision-making to be effective. There is need for accurate, timely and relevant dissemination of information. Information resource is one of the major issues and indices of university planning when the relevant information required for planning are not available at the appropriate time, there is bound to be poor planning, inappropriate decision-making, poor priority of needs, defective programming or scheduling of activities (Aminu, 2006). The implication is that, the university system will not be effective nor efficient in its operation. Poor management of information system has been perceived as a bottleneck to the successful management of universities in Nigeria. The existing population explosion due to high demand for university education makes the structure more complex and cumbersome for sustainable management information system to function effectively. This complex structure has posed big problem and challenge to our university authorities (Murdick and Ross, 2011).

2. Literature Review

In a research study conducted by Egbona (2002) to find out the extent of availability and usage of MIS infrastructures in tertiary institutions in south-south of Nigeria observed that most institutions lack basic MIS infrastructures likes computer, internet facilities for storage and retrieval of academics information and records. He attributed the ineffectiveness of most of these institutional to lack of MIS infrastructures. Most institutions in the area have been unable to give transcripts and results to students on time. He noted further that students' results are typed on manual typewriters and stored in file jackets. In a related study, Akpabio (2002) and Omirin (2007) come out with findings that MIS facilities were not adequately made available for use in storing relevant academic data nor used in decision-making process on long and short term planning and budgeting. Supporting the research work above, Alabi (2004) carried out an investigation on the availability and utilization of management information system MIS in both states and federal educational institutions in Nigeria. Specifically, the aim was to assess the adequacy of availability of MIS equipment and their utilization by students, lecturers and senior administrative staff of states and federal universities, the result of the findings showed that facilities were lacking and the available ones did not conform with the prescribed rules of lecturers and senior

administrators. Hence these institutions have been ineffective in their rate of performance. Low productivity was conspicuously observed. The researcher concluded that the availability of MIS infrastructure in the management of educational institutions significantly relates to school efficiency and effectiveness. Thus, integration of computers and internet facilities in the management of institutions largely enhances efficiency in the system in terms of students record processing and storage.

According to Mugenda (2006) effective MIS fosters the easy dissemination of information and knowledge by separating content from its physical location. He further asserted that MIS enhances day-to-day management of institutions and the various functional areas in which it could be used. The use of MIS in students' record keeping enhanced efficiency in output. There is therefore in existence, a strong relationship between MIS utilization on students' record keeping and institutional efficiency and effectiveness. In consonance with the above analysis, Obi (2003) in his study on management information system utilization for institutional effectiveness in Nigerian tertiary institutions affirmed that university system ranked first in MIS utilization for organizational effectiveness. Next in the rank order was the Federal polytechnics that has a mean score greater than those of the states. And privately owned tertiary institutions, based on the findings it was concluded and recommended that the government of the federation should establish MIS units in all tertiary institutions in the country, adequately fund them, mandate institutional administrators to effective use of available of MIS facilities. In addition, he advocated for inclusion of modern information technology in the school curriculum so as to exposed lecturers to the techniques and strategies of using and teaching others. Above all, it should be mandatory for staff and students to become computer literate.

The advent of information and communication technology has no doubt accelerated the provision and usage of electronic resources in the management institutions library services and enhancement of our reading culture. In other words, use of MIS in managing tertiary institutions libraries significantly influenced the effectiveness of these institutions. Specifically in the following areas of servicing the library, these areas are;

- i. Circulation control system
- ii. Catalogue maintenance system
- iii. On-line catalogue access.
- iv. Ability to share resource (catalogues) among libraries of different locations
- v. Acquisition control including search of on-lone sources of publications, on-line access to book dealers and book publishers and order placement.
- vi. Serials ordering and control
- vii. Statistical reporting and management information provision.

From analysis, MIS usage enhances institutional effectiveness in fulfilling its objectives in the institutions ability to help in making quick decision towards increased productivity of this challenge perhaps, that the National Universities Commission NUC (2007) introduced the computerized management information system to Nigerian universities. This effort has contributed to the development of a viable system towards maximizing the effective use of modern data approach to management practices in the university system. It is expected that MIS will assist the universities in decision-making on vital issues in their operations. In view of this, efforts are being made by the universities in the areas of acquisition and use of computers for information processing. Computer literacy, establishment of computer and internet services units. However, despite the laudable interest by NUC towards ensuring the effectiveness of Nigerian Universities by putting in place, MIS, experience has shown that most universities in the south-south geo-political zone of Nigeria are still ineffective in Nigeria today (Alabi, 2004), for instance, students of universities after graduating, spend several years with getting their academic transcripts and certificates. Workers salaries are not paid on time, improper keeping of personnel records, poor financial records, etc. it is on the basis of these inherent problems that this study was undertaken.

3. Statement of the problem:

Information is an indispensable instrument in the management of any organization. Due to the astronomical increase in the enrolment of students in Nigerian universities reliable data on students have become increasingly difficult to management. Administrators of educational institutions are frequently faced with problems of keeping records of students' admission and enrolment, students' academic records personnel records, research, interlinkages financial records and project management. These essential records could be effectively managed with the use of functional management information system MIS, to this end, due to the usefulness of MIS to universities the National Universities Commission (NUC, 2007) advocated for the provision of a well designed MIS to assist university management achieve their predetermined goals. The operational level of providing educational institutions with MIS instructional materials has been hampered by the absence of electricity supply to ensure a maximum usage of available MIS materials. This unfortunate situation has made the use of MIS in most universities in the south-south geo-political one of Nigeria very difficult. Moreso, available MIS materials are hardly properly utilized towards effective productivity due in part to lack of qualified and experienced MIS operators. The poor attitude of most institutions in the country to adequately fund MIS infrastructures and

ineffective supervision effort to monitor the implementation of what has been installed often posed serious problems to the effective use of management information system for institutional effectiveness.

4. Research questions:

The study was guided by three research questions;

- i. To what extent does availability of MIS infrastructures relate to institutional effectiveness?
- ii. How does the usage of MIS in processing students' records relates to institutional effectiveness?

5. Research hypotheses:

The following hypotheses were formulated to guide the study;

- i. There is no significant relationship between availability of MIS infrastructures and institutional effectiveness.
- ii. There is no significant relationship between the usage of MIS in managing students records and institutional effectiveness.

6. Research methodology

The research design adopted for this study is the Ex-post-facto design which attempt to describe, analysis, examine and report conditions and events about educational system performance. This design was considered relevant to this study because it allows the researcher to examine the data of the effects of MIS utilization on institutional effectiveness. The study was conducted in the south-south geo-political zone of Nigeria using four federal universities, purposive sampling technique was used for the study. The sample of the study was four hundred and fourteen (414) academic and non-academic staff which was selected through simple random technique from the four (4) universities in the zone namely, University of Calabar, University of Uyo, University of Port Harcourt, and University of Benin respectively. The data for the study were obtained through the use of self-constructed questionnaire titled "Management Information Usage and Universities Effectiveness Assessment Scale (MISUUEAS)". The instrument was a 30-item on a four-point likert type scale that measured the respondents' opinion. The instrument was face validated by experts in the Department of Maths/Statistics. The reliability of the instrument was confirmed through a trial test to ensure appropriateness of the instrument in measuring the variables accurately. Split-half reliability was estimate was used to determine the reliability of the various sub-scales of the research instrument. The reliability estimates of the sub-scales ranged from 0.70 to 0.94 respectively. This indicates that the instrument was stable and can be put to use for the study.

7. Result

The result of the study focus specially on the statistical analysis of the data gathered for the research study. The stat and result were presented using the research hypotheses formulated for the study. The result of the analysis is presented in table one below;

7.1. Hypothesis one:

There is no significant relationship between availability of MIS infrastructures and institutional effectiveness of universities. Result of analysis in table one above shows that the calculated r-values of 0.590, 0.790, 0.512, 0.691, and 0.841 for the relationship between availability of MIS infrastructures and examination conduct, students record keeping, staff appraisal and training, library services and overall institutional effectiveness were each greater than the critical r-value of 0.088 at 0.05 level of significance with 412 degrees of freedom. This means that there is a significant positive relationship between availability of MIS infrastructure and institutional effectiveness in terms of all the sub-variables considered, that is, the more available are MIS infrastructure in universities, the more effective the universities are in examination conduct, students' record keeping, staff appraisal, staff training and library services. Based on these results the null hypotheses were rejected.

7.2 Hypothesis two:

There is no significant relationship between the usage of MIS in managing students' records and institutional effectiveness. Result of analysis in table 2 above shows that the calculated r-values of 0.427, 0.507, 0.451, 0.259 and 0.617 for the relationship between usage of MIS in managing students records is greater than critical r-value of 0.088 at 0.05 level of significance with 142 degrees of freedom. This implies that there is a significant positive relationship usage of MIS in managing students' records and institutional effectiveness. The more effective in the use of MIS in managing students' records, the more attainment of institutional effectiveness. Based on the result, the null hypothesis was rejected.

8. Discussion of findings:

The analysis of the hypothesis in table one revealed that there exists a significant direct positive relationship between availability of MIS infrastructures and institutional effectiveness. This implies that universities in the south-south geo-political zone of Nigeria will become more effective when MIS infrastructures are adequately provided for usage. This finding corroborate with the finding of Ajayi and Ominn (2007) who investigated the

influence of availability of management information system on long and short term in south-western Nigerian universities. The researchers found out that availability of MIS infrastructures significantly relates to the effectiveness of universities. They further observed that MIS facilities were not adequately made available for use in decision-making process on both long and short term planning. This observation is in line with the study of Alabi (2004) who carried out an investigation on the availability and utilization of management information system (MIS) in federal and state universities in Nigeria. The research specifically assessed the adequacy of available MIS equipment, their utilization and the impact on the effectiveness of south-south universities. He found out that there is a significant relationship between availability of MIS facilities and institutional effectiveness. This implies that availability of infrastructures enhances overall productivity of the institutions. This has been noticeable as a result of the advantage computers/technologies (IS) have over analogue manual practice.

The result of hypothesis two revealed that there is a significant relationship between the usage of MIS and performance of educational institutions. This means that the university system will be more effective when MIS are used in managing students' records. In most universities without MIS students have been finding it difficult to have easy access to their results on time after graduation due to lack of MIS infrastructures. According to Fashinku (2008), in his comparative analysis of management of MIS utilization and organizational effectiveness in tertiary institutions, the result they obtained indicates that only a few tertiary institutions in Nigeria effectively used MIS in processing student's records and that is why deficiency is still noticeable in the release of student's results. The finding of Philips (2004) is also in line with the finding of this study whose study of tertiary institutions in Europe revealed that institutions with well management information system often succeed in the preparation of students academic records. The findings further revealed that there is a significant relationship between MIS usage and institutional effectiveness. This finding is in corroboration with Obi (2003) who conducted a study on management information system utilization for institutional effectiveness in universities in south eastern region of Nigeria. He also noticed that the use of MIS has greatly facilitated storage of accurate data meant for evaluation of personnel records of the institution. In support of this contention, Knight (2005) observed that institutions with a functional MIS often achieve administrative procedures with relative ease.

9. Conclusion:

On the basis of the findings of this study, it can be concluded that; Availability and adequate utilization of infrastructures in the educational system contributes significantly to enhancing institutional effectiveness of universities governance. The study also observed that there is a significant relationship between keeping of students' records and institutional effectiveness of the universities system. Considering the findings obtained from the study, the following recommendations are made; more MIS facilities should be made available in our universities since the task facing educational institutions are complex, staff handling students' records should be made to be computer literate to enhance the utilization and processing of students' records, the library staff, other staff and students should be made to undergo courses in computer to facilitate the use of MIS facilities in libraries.

REFERENCES

- Ajayi, F. & Omini, L. (2007) *Availability of MIS infrastructures and Efficiency in Educational Institutions in Duala*: Cameroon: Unpublished M.Ed. Thesis.
- Akpabio, C. (2002). Fundamental risk factors in deploying HHS Projects in Omani Government Organizations: *Journal of Global Information Management*. 10(4), 1-22.
- Alabi, A. T. (2004). *Management Information System Equipment Utilization in Federal and state universities in Nigeria*.
- Aminu, J. M. (2006). *Quality and Stress in Nigerian Education*. Maiduguri, Anonymous.
- Egbona, E. (2002) *Integration of Subsystems of Management Information System*. Finance Registry, planning and Library.
- Fashinku, T. U. (2008). *Management Information System as a Tool for Educational Achievement in Colleges* (Unpublished Master Project).
- Knight, S. U. (2005). Introduction to the Study of Management Information System (MIS) from a Global Perspective. *Journal of Educational Policy and Administration (JEPA)*.
- Mugenda, T. (2006) Learning Failures in Information System. *Development Information System Journal*. 9 (85-101).
- Murdick, T. & Ross, G. (2001). Successful Strategies for user Participation in Systems Development. *Journal of Management Information Systems*. 14 (2), 133-150.
- NUC (2007). *Management Information System for Nigerian Universities. A Report on the 2007 MIS seminar held at University of Jos, Nigeria. National Universities Commission of Nigeria*.
- Obi, E. (2003). *Educational Management Theory and Practice*. Enugu: JAMOE Nigeria Enterprises.

Philips, C.M. (2004). Towards the Use of Management Information System (MIS) and Effective Performance of Tertiary Institutions in Cross River State. (Unpublished Masters Dissertation) University of Ilorin.

Table one:

Pearson's product moment correlation coefficient analysis of the relationship between availability of MIS and Institutional effectiveness

Variables	N = 414			
	$\sum x$	$\sum x^2$	$\sum xy$	r
Availability of MIS infrastructure institutional effective in terms of;				
Examination conduct	7589	143811	11949	0.590*
Students record keeping	8017	162003	127649	0.750*
Staff appraisal	7277	137555	119480	0.790*
Staff training	7440	144144	118860	0.621*
Library services	7096	130984	113904	0.691*
Overall institutional effectiveness	72202	12951148	1148528	0.841*

Significant at 0.05, df = 412, critical r= 0.088

Table two:

Pearson's product moment correlation coefficient analysis of the relationship between usage of MIS in managing students' records and Institutional effectiveness

Variables	N = 414			
	$\sum x$	$\sum x^2$	$\sum xy$	r
Usage of MIS in managing students' records and institutional effectiveness in terms of;				
Examination conduct	7589	143811	136191	0.427*
Students record keeping	8017	162003	146849	0.407*
Staff appraisal	7277	137555	134725	0.599*
Staff training	7440	144144	136788	0.451*
Library services	7096	130984	130952	0.529*
Overall institutional effectiveness	72202	12951148	1326589	0.617*

Significant at .05, df = 412, critical r= 0.088

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